

SW  
Kennecott  
Utah Copper  
P.O. Box 525  
Bingham Canyon, Utah 84006-0525  
(801) 569-6506

Frederick D. Fox  
Director, Environmental Affairs

0451004  
**Kennecott**

January 27, 1994

Mr. Wayne Hedberg, Permit Supervisor  
State of Utah Department of Natural Resources  
Division of Oil, Gas, and Mining  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, UT 84180-1203

Subject: 1993 Annual Report - Pine Canyon, M/045/004

Dear Mr. Hedberg:

Enclosed, please find the 1993 Annual Report with water level and water quality data for the Carr Fork Mine. The data include results of water level measurements from the Carr Fork exhaust shaft and water quality analysis of samples taken from the Carr Fork exhaust and fresh air shafts.

If you have any questions, please give me a call.

Sincerely,

*Frederick D. Fox*

Frederick D. Fox  
Director, Environmental Affairs

FF:dbw

Enclosure

PINECAR.RPT12794

**RECEIVED**

FEB 01 1994

DIVISION OF  
OIL, GAS & MINING

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS, AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
Telephone: (801) 538-5340  
Fax: (801) 359-3940

ANNUAL REPORT OF MINING OPERATIONS

The informational requirements of this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, as amended, and the General Rules as promulgated under the Utah Mineral Regulatory Program. An operator conducting mining operations under Notice of intention must file an annual operations and progress report (FORM MR-AR) with the Division.

I. GENERAL INFORMATION

1. Report Time Period: From (mo./yr.) 1/92 To (Mo./yr.) 1/93
2. DOGM File Number: M /045/004
3. Mine Name: Pine Canyon Reclamation Project
4. Mineral(s) Mined: Copper (mine no longer active)
5. Legal Description (Location of Lands Affected):  
See attached Exhibit A
6. Name of Operator or Company: Kennecott Utah Copper
7. Permanent Address: P.O. Box 525  
Bingham Canyon, Utah 84006-0525
8. Company Representative (or designated operator):  
Name: Frederick D. Fox  
Title: Director, Environmental Affairs  
Address: P.O. Box 525, Bingham Canyon, UT 84006-0525  
Phone: 801-569-6555

— Please check if any of the above information has changed since previous year.

## II. MINING AND RECLAMATION

1. Was the mine active during the past year? Yes      No X
2. If active, how much ore or mineral was mined? Not an Active Mine
3. How much new or additional acreage was affected during this year?  
No new or additional acreage was affected during the reporting  
period. \* The existing reclaimed area was affected, see # 5.
4. Briefly describe any new or additional surface disturbances that occurred during the past year. This description should include the type of work performed, and volume of material moved.  
  
The Pine Canyon Reclamation Project was approved by DOGM and  
initiated in the Fall of 1988. Completion occurred in the Spring  
of 1989 (see approved plan, September 26, 1988).
5. How much acreage was reclaimed during past year?  
  
Approximately 12 acres of mature reclamation (part of the original  
130 acres reclaimed in the fall of 1988) sustained erosional damage  
in May 1993. An intense localized thunderstorm together with  
runoff from the existing snowpack in Pine Canyon created high  
sediment loading, breaching the main drainage channel and causing  
slope failures, sediment deposition, and bank erosion in the  
reclaimed area. The affected areas were repaired and reseeded in  
October and November 1993.
6. Briefly describe the reclamation work performed during the past year. This description should include methods employed, and an evaluation of the results.  
  
A combination of methods, including excavation, regrading,  
backfilling, ripping, scarifying, and construction of a 650 foot  
long rock gabion, were employed to rebuild or replace the  
structures damaged by erosion. An evaluation of results is not  
available at this time.
7. What is the total disturbed acreage at years end? 17.3 acres
8. Briefly summarize mining and reclamation planned for the upcoming year?  
  
No mining or reclamation activities are planned for this site.

NOTE: Section III., "Additional Information" applies only to large mining operations.

III. ADDITIONAL INFORMATION

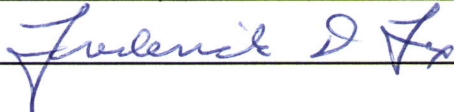
1. An updated surface facilities map should be attached if there have been significant changes since the previous map was submitted.
2. Any monitoring results or other reports that are required under the terms of the approved Notice of intention should also be attached.

IV. SIGNATURE REQUIREMENT

I hereby certify that the foregoing is true and correct.

Name (Typed or Print): Frederick D. Fox

Title of Operator: Director, Environmental Affairs

Signature of Operator: 

Date: 1/27/94

MNMR-AR

EXHIBIT A  
PINE CANYON RECLAMATION  
PROJECT, M/045/004

Description of lands affected:

Portions of the

S 1/2 SW 1/4, Section 17;

N 1/2 NW 1/4, W 1/2 NE 1/4, SE 1/4 NE 1/4, and E 1/2 SE 1/4,  
Section 20;

SW 1/4 SW 1/4, Section 21;

N 1/2 SW 1/4 and NW 1/4, Section 28;

NE 1/4 NE 1/4, Section 29;

Township 3 South, Range 3 West, Salt Lake Baseline and  
Meridian, Tooele County, Utah

# PINE CANYON WATER LEVEL INFORMATION

SAMPLE SITE	DATE	WATER ELEV (FEET ASL)
Carr Fork Exhaust Shaft Water Levels Monthly Summary	2/11/93	6187.2 (1)
	3/11/93	6178.5 (1)
	4/28/93	6187.2
	5/28/93	6257.8
	6/28/93	6263.0
	7/28/93	6263.5
	8/28/93	6250.2
	9/28/93	6236.6
	10/28/93	6227.9

(1) Manual sounding; all other readings recorded with SINCO VWP Data Collector.

PINE CANYON GROUNDWATER QUALITY DATA

DESCRIPTION	ANALYTE	MDL	TOTAL	DM	UNIT
Carr Fork Exhaust Shaft - Total Metals, Dissolved Metals (DM) and Other Parameters  Sample Date: October 27, 1993	pH		6.90		
	cond	1	3330		H
	temp		16.9		°C
	CO <sub>3</sub>	0.1	<MDL		mg/L
	HCO <sub>3</sub>	1	410		mg/L
	Ca	0.1	708		mg/L
	Mg	0.1	178		mg/L
	Na	0.1	19.0		mg/L
	K	0.1	8.8		mg/L
	SO <sub>4</sub>	5	1610		mg/L
	Cl	5	37		mg/L
	F	0.1	2.9		mg/L
	NO <sub>3</sub>	0.2	<MDL		mg/L
	TDS	5	3490		mg/L
	Al	0.005	0.33	0.15	mg/L
	As	0.001	0.128	0.080	mg/L
	Cu	0.001	0.003	<MDL	mg/L
	Fe	0.03	54.0	54.0	mg/L
	Mo	0.001	0.03	0.03	mg/L
	Mn	0.001	6.65	6.60	mg/L
	Ni	0.001	0.06	0.05	mg/L
	Pb	0.001	0.002	<MDL	mg/L
	Se	0.002	<MDL	<MDL	mg/L
	Zn	0.005	0.94	0.90	mg/L

H = micromhos/cm

PINE CANYON GROUNDWATER QUALITY DATA

DESCRIPTION	ANALYTE	MDL	TOTAL	DM	UNIT
Carr Fork fresh Air Shaft - Total Metals, Dissolved Metals (DM) and Other Parameters  Sample Date: October 27, 1993	pH		6.79		
	cond	1	3320		H
	temp		13.9		°C
	CO <sub>3</sub>	0.1	<MDL		mg/L
	HCO <sub>3</sub>	1	380		mg/L
	Ca	0.1	719		mg/L
	Mg	0.1	181		mg/L
	Na	0.1	18.4		mg/L
	K	0.1	8.3		mg/L
	SO <sub>4</sub>	5	1610		mg/L
	Cl	5	19		mg/L
	F	0.1	2.8		mg/L
	NO <sub>3</sub>	0.2	<MDL		mg/L
	TDS	5	3390		mg/L
	Al	0.005	0.11	0.072	mg/L
	As	0.001	0.11	0.004	mg/L
	Cu	0.001	0.005	<MDL	mg/L
	Fe	0.03	50.0	31.0	mg/L
	Mo	0.001	0.02	<MDL	mg/L
	Mn	0.001	6.46	5.40	mg/L
	Ni	0.001	0.04	0.03	mg/L
	Pb	0.001	0.004	<MDL	mg/L
	Se	0.002	<MDL	<MDL	mg/L
	Zn	0.005	1.11	1.10	mg/L

H = micromhos/cm